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## EUROPEAN PATENT APPLICATION

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(54) **Composite thermal transfer sheet.**

(57) When a temporary adhesive layer (2) for peelably bonding a transfer-receiving material (B) to a thermal transfer sheet (A) comprising a substrate film (1) and a heat-fusible ink layer (2) disposed on one side thereof is caused to comprise a specific adhesive, an excellent composite thermal transfer material is provided. In such a composite thermal transfer sheet, the thermal transfer sheet is firmly bonded to the transfer-receiving material so as not to cause wrinkles or deviation, both of these members may easily be peeled from each other so that the ink layer is exactly transferred to the paper in a transfer region and it is not transferred thereto at all in a non-transfer region, whereby the transfer-receiving material is not contaminated.

Further, when at least one selected from interfaces between respective layers, interior thereof and surfaces thereof is subjected to antistatic treatment, there is provided a composite thermal transfer sheet causing no trouble due to charging at the time of or after printing operation.

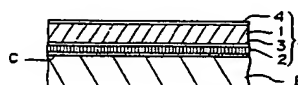
Further, when at least one end portion of a

sheet-type composite thermal transfer sheet is fixed, there is provided a composite thermal transfer sheet wherein unintended peeling is prevented.

Further, when an end portion of a co-winding type composite thermal transfer sheet is fixed, there is provided a composite thermal transfer sheet wherein troubles in paper-feeding and printing is prevented.

Further, when an end portion of a co-winding type composite thermal transfer sheet is preliminarily fixed to a winding tube, there is provided a composite thermal transfer sheet wherein the used thermal transfer sheet is easy to be handled and no problem occurs in secret-keeping.

**FIG.1**



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# EUROPEAN SEARCH REPORT

Application Number

EP 90 31 0261

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	PATENT ABSTRACTS OF JAPAN, vol. 10, no. 81, (M-465)[2138], 29th March 1986; & JP-A-60 222 294 (NIPPON VICTOR K.K.) 06-11-1985 * The whole abstract *	1-8,12, 13,18-24,28, 35	B 41 M 5/38
X	PATENT ABSTRACTS OF JAPAN, vol. 5, no. 206, (M-104)[878], 26th December 1981; & JP-A-56 121 791 (NIPPON DENSHIN DENWA KOSHA) 24-09-1981 * The whole abstract *	1-8,12, 13,18-24,28, 35	
A	PATENT ABSTRACTS OF JAPAN, vol. 11, no. 135, (M-585)[2582], 28th April 1987; & JP-A-61 273 989 (TOPPAN PRINTING CO. LTD) 04-12-1986 * The whole abstract *	1	
A	PATENT ABSTRACTS OF JAPAN, vol. 10, no. 304, (M-526)[2360], 11th October 1986; & JP-A-61 116 592 (CARBON PAPER K.K.) 04-06-1986 * The whole abstract *	1	
A	EP-A-0 194 106 (DAI NIPPON INSATSU K.K.) * Page 39, line 33 - page 40, line 13 *	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B 41 M 5/00
The present search report has been drawn up for all claims.			
Place of search THE HAGUE		Date of completion of the search 22-08-1991	Examiner MARKHAM R.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document			

EPO FORM 150 (01.82 (P040))



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### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid,  
namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions,  
namely:

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- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid,  
namely claims:
- ☒ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.  
1-8, 12, 13, 18-24, 28, 35  
namely claims:



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#### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-8,12,13,18-24,28,35: Co-winding registration system with adhesive layer.
2. Claims 9-11: Hiding layer means.
3. Claims 14-17: Anti-static means e.g. porous carbon.
4. Claims 25-27: Anti-curl means.
5. Claims 29-34: Roll/mandrel means.
6. Claims 36,37: Package system.
7. Claim 31: End-point detection mark.